

## What is a hemangioma?

A hemangioma is a common type of birthmark. It is made of blood vessel cells. These cells multiply at a rate that is faster than normal. A hemangioma is a tumor, but it is not cancer (benign). The tumor usually appears in the first few weeks of life. Deep hemangiomas may take longer before you can see them.

## What do they look like?

At first the tumor may look like a bruise or a red bump.

- If it is near the outer layers of the skin it is called a **superficial hemangioma**. It will look bright red to purple. The red surface may look uneven. This is sometimes called a strawberry birthmark because of how it looks. When the hemangioma is shrinking it may look gray or purple, especially in the center.
- A tumor that is deeper in the skin or in the fat layers is called a **deep hemangioma**. It may look blue or normal skin color. Deep hemangiomas may not be seen or felt until the baby is 4 to 6 months old.
- Most are **mixed hemangiomas**. That means they have both superficial and deep parts. Early on, the tumor will mark out how much body surface it will take up. They do not spread as they grow, but they thicken or puff out from the body.

Often there are large blood vessels that go to the tumor. These give the tumor its blood supply.

Hemangiomas feel warm to the touch. They are not painful unless the skin over them is injured or ulcerated.



Superficial hemangioma



Mixed hemangioma



Deep hemangioma

## Where do they appear?

Hemangiomas are most common on the scalp, face, and neck, but can be anywhere on the body. Some are very small, while others are quite large. Large ones may follow the shape of the body part that is affected.

Most infants have only one skin hemangioma. About 20% of infants will have more than one.

It is uncommon for hemangiomas to form on the internal organs of the body. If a baby has more than six skin tumors or a very big tumor, it is possible there may be internal tumors. Internal hemangiomas can be in the liver, gastrointestinal tract, airway or other organs.

The doctor will examine your infant's stomach to check the size of the liver and spleen. Imaging (radiology) tests will be ordered if there is a risk of internal tumors.

### What causes them?

- The cause is not known at this time.
- They are more common in Caucasians, girls and premature or low birth weight babies.
- Hemangiomas are not the result of anything the mother did during the pregnancy.

### How are they diagnosed?

Most often, a diagnosis is made by the way the tumor looks and the history of the tumor. Sometimes, a sound device called a doppler is used to check the blood flow through the tumor. It is much like an ultrasound. A skin biopsy or imaging may be done if the tumor is not typical.

The word hemangioma is sometimes incorrectly used to describe some blood vessel disorders in older children and adults. The term infantile hemangioma is often used to help clarify these tumors. Be careful when looking up information on the web.

### Growth of a Hemangioma

Growth tends to be fast for the first few weeks or months of life. At around 8 months, most stop growing. They begin to shrink around 1 year. Some tumors may go away in 1 to 2 years. Larger ones will take longer to go away and have more chance of scarring.

Each tumor is unique. Even on the same child one tumor may not grow and another may be quite big. When a tumor completes the shrinking phase it will never start to grow again.

Phase	Age of Infant/Child	What happens?
<b>Growth</b> (proliferative)	Newborn to 14 months (average 6-8 months)	Hemangioma grows quickly. It puffs out. The color is bright red.
<b>Resting</b> (plateau)	8-14 months old	No change in size. The skin is less shiny and is a deeper red color.
<b>Shrinking</b> (involution)	1-5 years	Shrinks and color changes to purple and gray. May fade completely.

### What problems might happen?

About 1 out of 4 hemangiomas will have some type of problem. The chance of problems depends on the size, location and the rate of growth of the tumor.

As a tumor grows, it can interfere with the function of a body part. If it is on the eyelid, it may cause problems with your child's vision. It could even cause permanent loss of sight. Other areas that cause problems are the mouth, airway, nose, ear, or in the diaper area.

## Problems (continued)

### **Skin breakdown (ulceration)**

The skin over a tumor may form a scab or crust. This is called skin breakdown or ulceration. This can be very painful for your child. If you think your child is in pain, call the doctor.

If your child is fussy, won't eat and has a hard time sleeping they may be in pain. There is also more chance of infection and scarring if the tumor ulcerates. Treatment might be needed to speed healing and to prevent infection and scarring.

### **Bleeding**

The skin over the tumor protects it from bleeding. If the skin is injured, it can bleed and form a crust or scab. The blood vessels that make up the tumors are not normal. When the tumors bleed, they will bleed quickly but only for a short time. The bleeding should stop after you put gentle, direct pressure on for a few minutes. If bleeding returns or does not stop with pressure, call your child's doctor.

### **Will they leave scars?**

The final look of the skin depends on the size and location of the tumor. It also depends on whether breakdown or infection has occurred. Some areas are more likely to scar than others, such as the nose, lip, forehead and ear. Sometimes, extra skin and fat is left in these areas once the shrinking phase is done. This extra tissue can be removed by a plastic surgeon.

### **How are they treated?**

Most hemangiomas will shrink and go away without treatment. Some will need treatment to slow or stop their growth. Some need treatment to prevent scarring. Quick and aggressive treatment will be done if they are in areas that can threaten your child's:

- Health. These areas include the airway or liver.
- Development. This includes the ear canal or eyelid.
- Face. A hemangioma on your child's nose, lips, or forehead could disfigure your child's face.

### **Treatments include:**

**Close watching.** Most tumors go away with no permanent damage. Regular visits to the doctor and photos are needed. Young infants, with a hemangioma in the growth phase, will need to be watched more closely. This lets the doctor start a treatment as soon as it is needed.

**Topical Timolol.** The medicine is put on the hemangioma one to two times a day. It can help slow or stop the growth. Topical treatment is helpful for small superficial hemangiomas.

**Other topical therapies.** Antibiotic ointment or thick barrier creams such as triple paste may be used to protect the area.

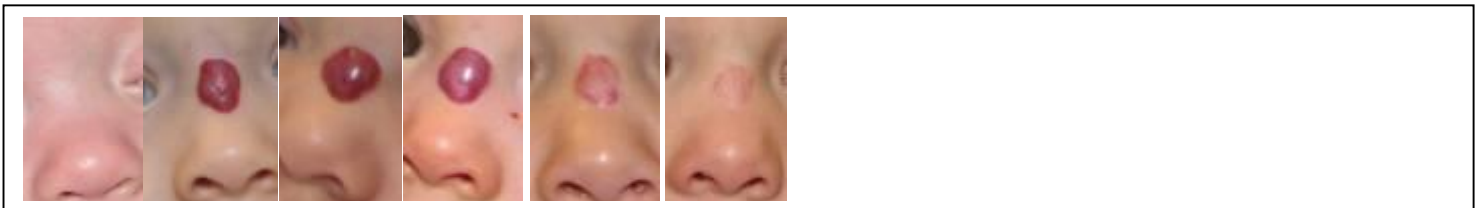
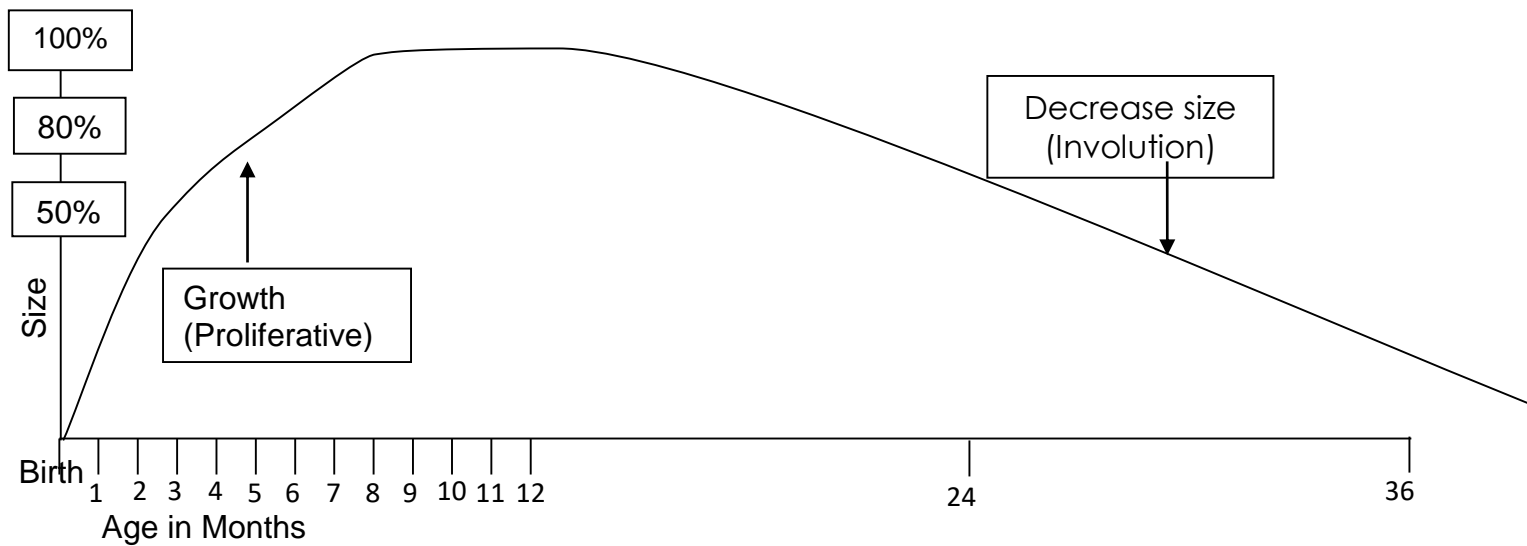
**Oral Propranolol.** This medicine has been used for many years to treat high blood pressure. A new use for it is to treat hemangiomas. Side effects such as low blood sugar, low blood pressure and slow heart rate are a concern. Propranolol is given by mouth 2 to 3 times a day.

**Laser treatment.** The laser can treat the outer layer of a hemangioma. Laser is used to help:

- Stop bleeding.
- Heal skin breakdown.
- Decrease the red color when the tumor is done growing.

**Surgery.** Surgery is helpful for tumors that ulcerate and don't heal after 3 to 4 weeks. It can also be used to repair sagging skin that is left after the shrinking phase is done. Surgery will leave a scar.

### Infantile Hemangioma Growth Pattern



**ALERT:** Call your child's doctor, nurse, or clinic if you have any questions or concerns or if your child has special health care needs that were not covered by this information.

**This sheet was created to help you care for your child or family member. It does not take the place of medical care. Talk with your healthcare provider for diagnosis, treatment and follow-up.**